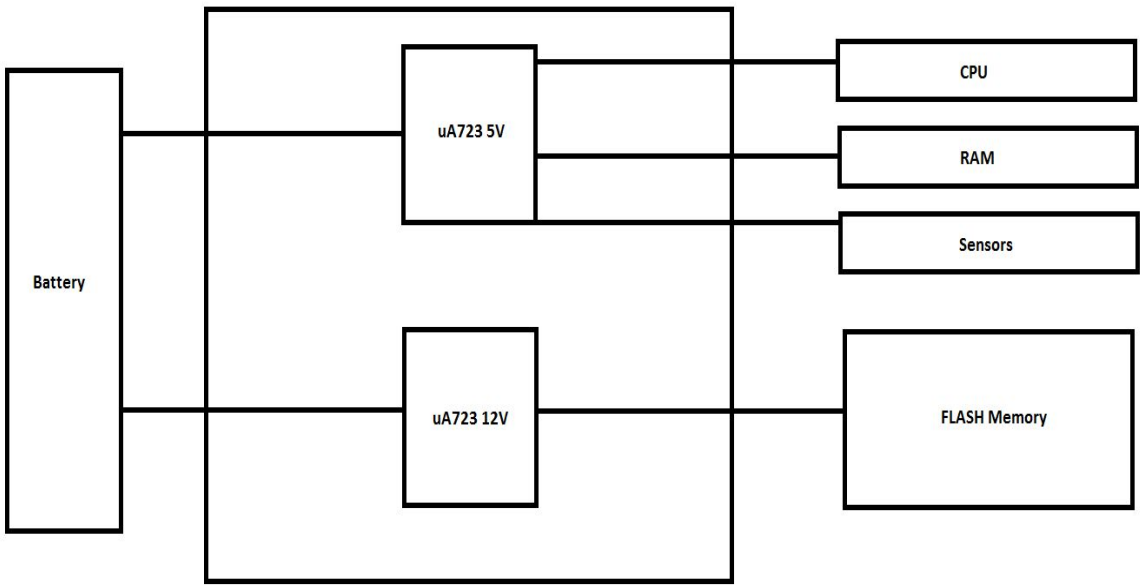
Antarctic NKAJN723 5V/12V Digital Power Supply

Data Sheet

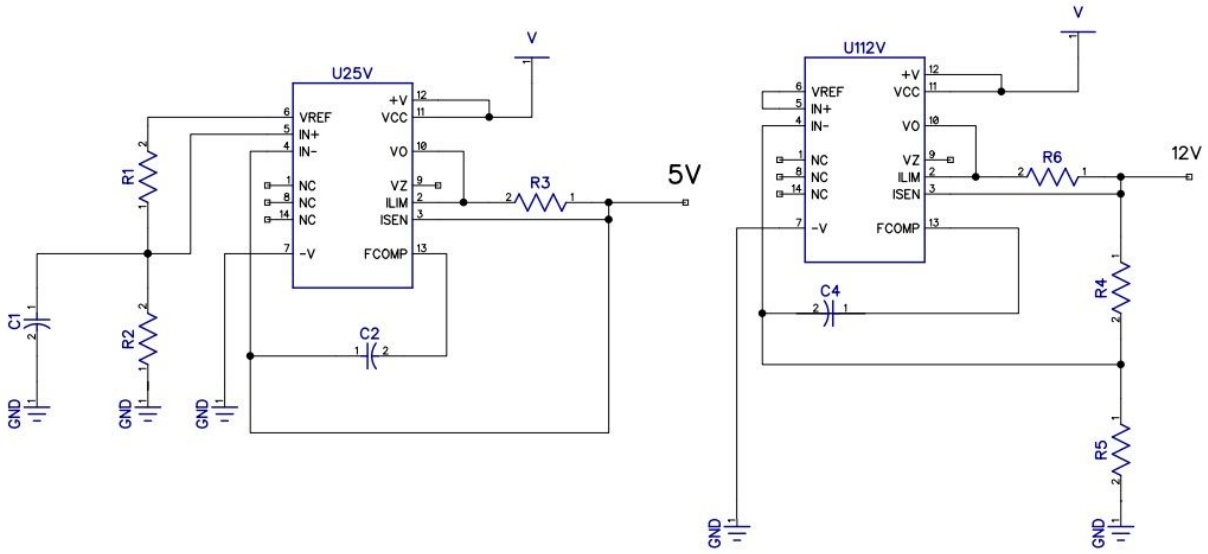
Features

- **Operates from an 7-30V input DC voltage source**
- **Outputs 5V and 12V from 2 different pads**
- **Accuracy of 5V +/- 0.15V and 12V +/- 0.8V**
- **4 pins (Input, 5V output, 12V output and Ground)**
- **Output Current capability of up to 20mA for both outputs**
- **Short circuit current of 27mA**

Functional Block Diagram



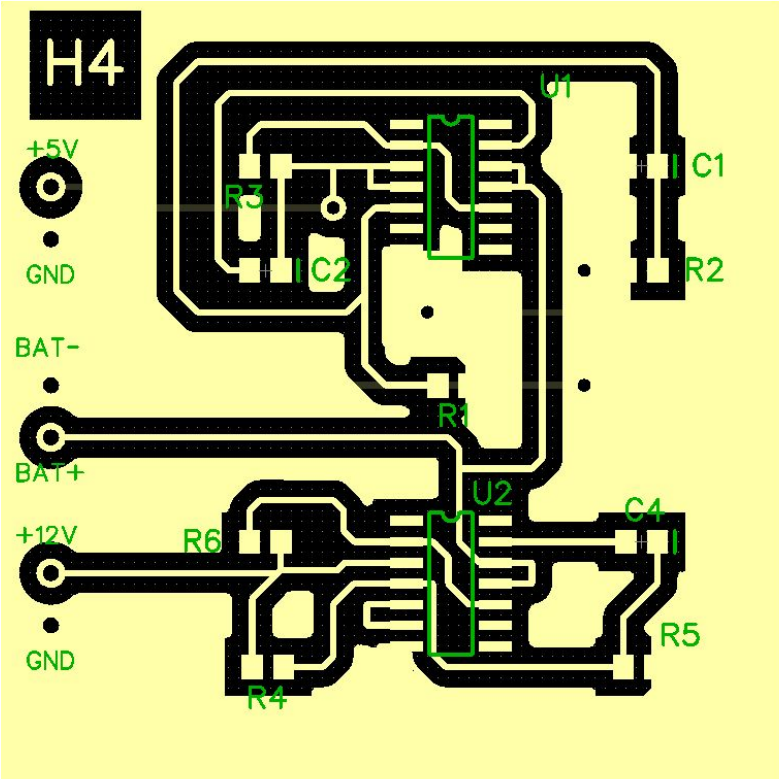
Circuit Schematic Diagram



R1 = 2200 Ohms +/- 5%
R2 = 5100 Ohms +/- 5%
R3 = 22 Ohms +/- 1%
R4 = 4700 Ohms +/- 1%
R5 = 7500 Ohms +/- 5%
R6 = 22 Ohms +/- 1%

C1 - 1uF
C2 - 100pF
C3 - 100pF

Circuit Board Design



Description

The NKAJN723 contains two precision integrated-circuit voltage regulators, featuring high ripple rejection, excellent input and load regulation, excellent temperature stability, and low standby current with voltage outputs of 5V and 12V. The NKAJN723 is characterized for operation from 0°C to 70°C. It has an output current capability of 20mA with loads with a maximum short circuit current of 27mA.

Absolute Maximum Ratings

Peak voltage from VCC+ to GND	50V
Continuous voltage from VCC+ to GND	40V
Input-to-output voltage differential	40V
Storage temperature range	-55°C to 125°C
Current from REF	15mA

Electrical Characteristics

Parameters	**Test conditions**	**Temp (°C)**	**uA723C(12V output) Min Typ Max**	**uA723C (5V output) Min Typ Max**	**Unit**
Input regulation	**Vi = 13.7V to 30V** **Vi = 7V to 30V**	**25**	**10.8 12 12.5**	**4.6 5 5.4**	**V** **V**
Output regulation		**25** **70**	**11.6 12 12.1** **11.7 12.1 12.2**	**4.85 5 5.1** **4.9 5.05 5.15**	**V** **V**
Reference voltage		**25**		**6.8 7.15 7.5**	**V**

Temperature coefficient of output voltage		**0 to 70**		**0.003 0.015**	**% / °C**
Short circuit output current	**Rsc = 22Ω**	**25**	**27**	**27**	**mA**
Minimum load resistance	**Vi = 16.75V**	**25**	**444.4**	**185.2**	**Ω**